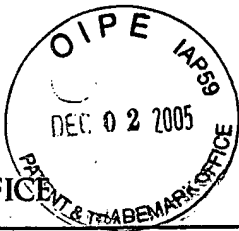




UNITED STATES  
PATENT AND  
TRADEMARK OFFICE



BP 2057

DECEMBER 11, 2001

PTAS

GARLICK, HARRISON & MARKISON, LLP  
BRUCE E. GARLICK  
P.O. BOX 160727  
AUSTIN, TX 78716-0727

Under Secretary of Commerce For Intellectual Property and  
Director of the United States Patent and Trademark Office  
Washington, DC 20231  
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\*101872308A\*

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 09/28/2001

REEL/FRAME: 012228/0886  
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:  
SHI, HONG

DOC DATE: 09/27/2001

ASSIGNEE:  
BROADCOM CORPORATION  
16215 ALTON PARKWAY  
IRVINE, CALIFORNIA 92618-7013

SERIAL NUMBER: 69968060  
PATENT NUMBER:

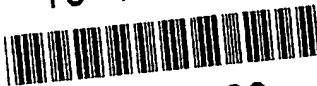
FILING DATE: 10/01/2001  
ISSUE DATE:

KIMBERLY WHITE, EXAMINER  
ASSIGNMENT DIVISION  
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10-11-2001

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U.S. DEPARTMENT OF COMMERCE



PATENT AND TRADEMARK OFFICE

101872308

To the Honorable Commissioner of Patent

Name of conveying party(ies):  
**Hong Shi**

Additional name(s) of conveying party(ies) attached? ☐ yes ☒ no

2. Name and address of receiving party(ies):

Name: **Broadcom Corporation**

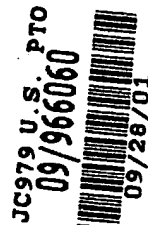
Internal Address:

Street Address: **16215 Alton Parkway**

City: **Irvine** State: **California** Zip: **92618-7013**

Country: **United States**

Additional name(s) & address(es) attached? ☐ Yes ☒ No



3. Nature of conveyance:

☒ Assignment

☐ Security Agreement

☐ Other

☐ Merger

☐ Change of Name

Execution Dates: **September 27, 2001**

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: **September 27, 2001**

A. Patent Application No.(s)

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: **Bruce E. Garlick**

Internal Address: **Garlick, Harrison & Markison, LLP**

Street Address: **P.O. Box 160727**

City: **Austin**

State: **TX**

Zip: **78716-0727**

6. Total number of applications and patents involved: .....

1

7. Total fee (37 C.F.R. 3.41) .....\$ **40.00**

☒ Enclosed

☐ Authorized to be charged to deposit account

8. Deposit account number:

(Attach duplicate copy of this page if paying by deposit account)

10/10/2001 101A21 00000050 09966060

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9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

**Bruce E. Garlick**

Name of Person Signing

Signature

**September 28, 2001**

Date

Total number of pages comprising cover sheet:

1

**ASSIGNMENT for Patent Application**

In consideration of the sum of One Dollar (\$1.00) or equivalent and other good and valuable consideration paid to each of the undersigned inventor Hong Shi, the undersigned inventor(s) hereby sell(s) and assign(s) to Broadcom Corporation, a California corporation having a principal place of business at 16215 Alton Parkway, Irvine, California 92618-7013 (the Assignee) his/her entire right, title and interest, including the right to sue for past infringement and to collect for all past, present and future damages:

check applicable box (es) ☒ for the United States of America (as defined in 35 U.S.C. § 100 et seq.),  
☒ and throughout the world,

(a) in the invention(s) known as **LNA GAIN ADJUSTMENT IN AN RF RECEIVER TO COMPENSATE FOR INTERMODULATION INTERFERENCE** for which application(s) for patent in the United States of America has (have) been executed by the undersigned on 9/27, 2001 in any and all applications thereon, in any and all Letters Patent(s) therefor, and

(b) in any and all applications that claim the benefit of the patent application listed above in part (a), including continuing applications, reissues, extensions, renewals and reexaminations of the patent application or Letters Patent therefor listed above in part (a), to the full extent of the term or terms for which Letters Patents issue, and

(c) in any and all inventions described in the patent application listed above in part (a), and in any and all forms of intellectual and industrial property protection derivable from such patent application, and that are derivable from any and all continuing applications, reissues, extensions, renewals and reexaminations of such patent application, including, without limitation, patents, applications, utility models, inventor's certificates, and designs together with the right to file applications therefor; and including the right to claim the same priority rights from any previously filed applications under the International Agreement for the Protection of Industrial Property, or any other international agreement, or the domestic laws of the country in which any such application is filed, as may be applicable;

all such rights, title and interest to be held and enjoyed by the above-named Assignee, its successors, legal representatives and assigns to the same extent as all such rights, title and interest would have been held and enjoyed by the Assignor had this assignment and sale not been made.

The undersigned inventor(s) agree(s) to execute all papers necessary in connection with the application(s) and any continuing (continuation, divisional, or continuation-in-part), reissue, reexamination or corresponding application(s) thereof and also to execute separate assignments in connection with such application(s) as the Assignee may deem necessary or expedient.

The undersigned inventor(s) agree(s) to execute all papers necessary in connection with any interference or patent enforcement action (judicial or otherwise) related to the application(s) or any continuing (continuation, divisional, or continuation-in-

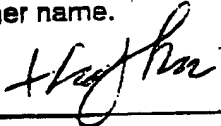
part), reissue or reexamination application(s) thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference or patent enforcement action.

The undersigned inventor(s) hereby represent(s) that he/she has full right to convey the entire interest herein assigned, and that he/she has not executed, and will not execute, any agreement in conflict therewith.

The undersigned inventor(s) hereby grant(s): Bruce E. Garlick, Registration No. 36,520, James A. Harrison, Registration No. 40,401, Timothy W. Markison, Registration No. 33,534, and Shayne X. Short, Registration No. 45,105, and Robert C. Strawbrich, Registration No. 36,692; all of Garlick, Harrison & Markison, LLP, P.O. Box 160727, Austin, Texas 78716-0727, power to insert in this assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

IN WITNESS WHEREOF, executed by the undersigned inventor(s) on the date opposite his/her name.

Hong Shi: \_\_\_\_\_



Date: \_\_\_\_\_

9/27/2001

JOHN 10 '02 12:27 FR

L. Jeyaraj

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JAN 11 '02 12:38

P.04

**ASSIGNMENT for Patent Application**

In consideration of the sum of One Dollar (\$1.00) or equivalent and other good and valuable consideration paid to the undersigned inventors, Zhongming Shi and Reza Rofougaran, the undersigned inventors hereby sell and assign to Broadcom Corporation, a California corporation having a principal place of business at 16215 Alton Parkway, Irvine, California 92618-7013 (the Assignee) their entire right, title and interest, including the right to sue for past infringement and to collect for all past, present and future damages:

check applicable box (es) ☒ for the United States of America (as defined in 35 U.S.C. § 100 et seq.),  
☒ and throughout the world,

(a) in the invention known as **A DIRECT CONVERSION RF TRANSCEIVER FOR WIRELESS COMMUNICATIONS** for which application for patent in the United States of America has been executed by the undersigned on the date(s) indicated below in any and all applications thereon, in any and all Letters Patent(s) therefor, and

(b) in any and all applications that claim the benefit of the patent application listed above in part (a), including continuing applications, reissues, extensions, renewals and reexaminations of the patent application or Letters Patent therefor listed above in part (a), to the full extent of the term or terms for which Letters Patents issue, and

(c) in any and all inventions described in the patent application listed above in part (a), and in any and all forms of intellectual and industrial property protection derivable from such patent application, and that are derivable from any and all continuing applications, reissues, extensions, renewals and reexaminations of such patent application, including, without limitation, patents, applications, utility models, inventor's certificates, and designs together with the right to file applications therefor; and including the right to claim the same priority rights from any previously filed applications under the International Agreement for the Protection of Industrial Property, or any other international agreement, or the domestic laws of the country in which any such application is filed, as may be applicable:

all such rights, title and interest to be held and enjoyed by the above-named Assignee, its successors, legal representatives and assigns to the same extent as all such rights, title and interest would have been held and enjoyed by the Assignors had this assignment and sale not been made.

The undersigned inventors agree to execute all papers necessary in connection with the application and any continuing (continuation, divisional, or continuation-in-part), reissue, reexamination or corresponding application(s) thereof and also to execute separate assignments in connection with such application(s) as the Assignee may deem necessary or expedient.

JAN 11 '02 12:28 P.M.

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Each of the undersigned inventors agrees to execute all papers necessary in connection with any interference or patent enforcement action (judicial or otherwise) related to the application or any continuing (continuation, divisional, or continuation-in-part), reissue or reexamination application(s) thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference or patent enforcement action.

Each of the undersigned inventors hereby represents that he has full right to convey the entire interest herein assigned, and that he has not executed, and will not execute, any agreement in conflict therewith.

Each of the undersigned inventors hereby grants: Bruce E. Garlick, Registration No. 36,520, James A. Harrison, Registration No. 40,401, Timothy W. Markison, Registration No. 33,634, Shayne X. Short, Registration No. 45,105, and Robert C. Strawbrich, Registration No. 36,692; all of Garlick, Harrison & Markison, LLP, P.O. Box 160727, Austin, Texas 78716-0727, power to insert in this assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

IN WITNESS WHEREOF, executed by each of the undersigned inventors on the date opposite his name.

  
ZHONGMING SHIDate: 1-11-2002  
REZA ROFOUGARANDate: 1-11-2002